



## **Around The Region In Homeland Security August 2011**

The Northwest Regional Technology Center (NWRTC) is a virtual resource center, operated by the Pacific Northwest National Laboratory (PNNL), to support regional preparedness, resiliency, response, and recovery. The NWRTC enables homeland security solutions for emergency responder communities; federal, state, and local agencies; and private sector stakeholders in the Northwest. This monthly newsletter summarizes activities related to homeland security in the region, and this issue highlights

- Emerging trends in port security technology
- New work to combine physical protection and cyber security vulnerability assessments
- A resource that can help address questions on chemical, biological, and radiological/nuclear risks.

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### **Ports Explore Emerging Trends in Security Technology**

In July, experts from around the nation met in New Orleans at the Port Security Seminar and Exhibition, hosted by the American Association of Port Authorities. One of the sessions, led by Arif Ghouse, Director of Security and Emergency Planning for the Port of Seattle, dealt with emerging trends in port security technology. Panelists included Ghouse, A.J. Briding (Principle Consultant, homeland security and emergency management, CIBER Federal Defense and Intelligence), and NWRTC Director Steve Stein.

Stein shared recent advances in a variety of security devices that can aid active ports. For example, next-generation infrared cameras can work in high-humidity environments like port settings to more accurately identify threats. Advanced imaging systems are inexpensive and can be rapidly deployed for additional situational awareness. Unmanned platforms can deploy communication devices for up to six months. In addition, multisensory integration is combining information from many sources to aid decision making.

A good example of one of these technologies comes from the National Institute for Standards and Technology, which developed a method to assess and monitor the structural health of buildings and critical infrastructure by detecting surface motion. The system, which consists of a series of low-cost sensors, is simple, quick, and ad hoc. It can identify collapse precursors and display a threat level for all types of structures and structural materials.

Advances such as these are helping ports and other agencies in the homeland security enterprise better detect, identify, and respond to potential incidents.

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### **Physical Protection and Cyber Security—Assessments Need to be Combined**

Physical protection is largely based on a system of sophisticated electronic components and human response forces to detect, delay, and neutralize physical attacks on a facility or asset protection system. More and more, this protection relies on complex computer systems for alerting, tracking assets, and allowing access using common credentials. These electronic connections may

inadvertently present an opportunity for an adversary to compromise the physical protection systems through a cyber intrusion, rendering them not only unusable but compromised by providing the illusion of security. Likewise, the physical protection of cyber systems is unknowingly inadequate.

Now an internally funded research and development project at PNNL, in conjunction with QinetiQ North America, is identifying and evaluating areas of overlap and interaction in the vulnerability assessment process between cyber security and physical protection. The work will result in new software tools to quantify the undetermined risks associated with cyber attacks on the physical protection system and with physical threats to the electronic communication system. Understanding the interactions and the nuances of the two areas helps organizations implement security measures that complement each other across both domains, increasing the security posture of a site or facility.

PNNL subject matter experts from both the physical and the cyber security domains identified possible “blending” methodologies and cross-trained each other on various aspects of the physical and cyber security assessment processes during a recent mock assessment. A local critical infrastructure entity volunteered to host this blended physical/cyber security assessment on a proof-of-concept basis, and the lessons learned are contributing to further integration of the two methodologies.

For more information on the assessment process, contact [Doug MacDonald](mailto:Doug.MacDonald@pnnl.gov) at 509-372-6148.

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## Got a Technical Question on CBRN Risks? Ask CBRNIAC!

If you’re faced with a homeland security technical challenge, help is just an e-mail away. The Chemical, Biological, Radiological, and Nuclear Defense Information Analysis Center (CBRNIAC) provides no-cost technical inquiry responses (up to 4 hours of analyst time) addressing chemical, biological, radiological, and nuclear defense and homeland security. The CBRNIAC inquiry team of scientists, engineers, and subject matter experts are available to the Department of Defense, other federal government agencies, their contractors, and state and local government agencies.

To learn more about the CBRNIAC or request assistance, visit the [web site](#) or contact Deputy Director [James King](#) at Battelle, 410-306-8517.

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## Upcoming Events

August 16 and 17

Northwest Tribal Emergency Management Council’s 8<sup>th</sup> Annual [Public Health Emergency Preparedness Conference](#)  
Shelton, Washington

September 12-15

South Dakota Emergency Management Association [Conference](#)  
Yankton, South Dakota

September 27-29

Washington Emergency Management Association [Conference](#)  
Port Angeles, Washington

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*Around the Region in Homeland Security* is a monthly report from PNNL’s Northwest Regional Technology Center for Homeland Security. For more information, contact Director Steve Stein at [steve.stein@pnnl.gov](mailto:steve.stein@pnnl.gov) or 206-528-3340, Deputy Director Ryan Eddy at [ryan.eddy@pnnl.gov](mailto:ryan.eddy@pnnl.gov) or 509-372-6622, or Deputy Director Regional Programs Ann Lesperance at [ann.lesperance@pnnl.gov](mailto:ann.lesperance@pnnl.gov) or 206-528-3223, or see the website at <http://nwrwc.pnnl.gov>.

